



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

April 4, 2004

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations for the Kerr-McGee Kress Creek Superfund Site

FROM: Jo Ann Griffith, Chair
National Remedy Review Board

A handwritten signature in black ink, appearing to read "Jo Ann Griffith", is written over the printed name and title.

TO: Richard C. Karl, Acting Director
Superfund Division

Purpose:

The National Remedy Review Board (NRRB) has completed its review of the proposed cleanup action for the Kerr-McGee Kress Creek Superfund Site in Dupage County, Illinois. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review:

The Administrator announced the NRRB as one of the October 1995 Superfund Administrative Reforms to help control response costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost proposed response actions prior to their being issued for public comment. The Board reviews all proposed cleanup actions that exceed its cost-based review criteria.

The NRRB evaluates the proposed actions for consistency with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; regional, state/tribal, and other stakeholder opinions on the proposed actions, and any other relevant factors.

Generally, the NRRB makes advisory recommendations to the appropriate regional decision maker. The Region will then include these recommendations in the administrative record for the site, typically before it issues the proposed cleanup plan for public comment. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of response options, may influence the final regional decision. The Board expects the regional decision maker to respond in writing to its recommendations within a reasonable period of time, noting in particular how the recommendations influenced the proposed cleanup decision, including any effect on the estimated cost of the action. It is important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

Overview of the Proposed Action:

The Kerr-McGee Kress Creek Site (Kress Creek Site) is located in DuPage County, Illinois, and comprises an approximately 6.7 mile section of Kress Creek and the West Branch DuPage River. The site extends from a storm sewer outfall located on Kress Creek just east of the Elgin, Joliet and Eastern Railway to the creek's confluence with the river, and from the confluence downstream to the McDowell Dam. Sediments and floodplain soils at the site are contaminated with radioactive thorium residuals. The preferred alternative includes excavation and off-site disposal of targeted sediment/soil throughout the site. Under this alternative, targeted materials (defined as sediment and floodplain soils exceeding the Applicable or Relevant and Appropriate Requirement (ARAR)-based cleanup level of 7.2 pCi/g combined radium) would be removed in-the-dry via mechanical excavation and disposed at an off-site facility. Aquatic and terrestrial areas impacted by construction would be restored and improved (to the extent possible) after excavation activities are complete and stabilized and revegetated as necessary. Periodic monitoring and necessary maintenance would be conducted for a minimum of three years to assess the effectiveness of stabilization measures and progress toward restoration goals. Approximately 75,000 cubic yards of targeted materials would be removed from the site. The total cost of the preferred alternative is estimated to be approximately \$72,000,000.

NRRB Advisory Recommendations:

The NRRB reviewed the information package describing this proposal and discussed related issues with Rebecca Frey and Larry Schmitt on March 3, 2004. Because of the unique set of circumstances involving the various stakeholders at the site and their involvement in the selection of the preferred alternative, the Board elected not to discuss any potential alternative approaches to achieving the Region's objectives.

Based on the review and discussion at the meeting, the Board offers the following comments:

1. The package does not indicate the level of risk associated with the 7.2 pCi/g combined radium cleanup level. For the sake of comparability with other sites, the Board

encourages the Region to identify the risk level associated with the 7.2 pCi/g remedial goal for the appropriate exposure scenario (e.g., recreational exposure) and include this information in the decision documents.

2. The remedy being proposed by the Region involves the excavation and off-site disposal of radiologically-contaminated materials to predetermined depths with no post-excavation sampling to confirm the achievement of cleanup goals. The rationale for not including post-excavation sampling is based on the large amount of available data that the Region believes adequately characterizes the contamination. The Board notes that this approach is not typical. At other sites involving subsurface cleanups, even those with extensive data sets, EPA has often found contamination beyond expected areas. Without post-excavation sampling, it may be difficult to verify that cleanup goals have been met. Consequently, the Board recommends that the Region reconsider the need for some degree of post-excavation confirmation sampling.
3. The package as presented to the Board identified several local ordinances as ARARs (see Tables 18 and 19). Consistent with CERCLA, the NCP defines ARARs as Federal and State environmental or facility siting laws. Local ordinances may be identified as criteria “to be considered” (TBC). The Board recommends the decision documents reflect this distinction.
4. The Board acknowledges that for this site, the monitored natural recovery remedy is not preferred given the time frames associated with the radioactive decay of the contaminants present and other site characteristics. However, the estimated present worth cost of \$250K for MNR of Kress Creek likely underestimates the true cost of long-term monitoring. The Board recommends that the Region develop a more realistic cost estimate for MNR to include comprehensive monitoring and costs of administering institutional controls.
5. The package as presented to the Board did not address the potential risks associated with chemical toxicity of the site contaminants, for example, total uranium and other chemical contaminants. The Board recommends that the Region include the results of these evaluations in the decision documents and compare the selected remedy options to the protectiveness criteria for ecological risk. This may be accomplished through comparison of anticipated residual chemical concentrations to the screening criteria used in the ecological risk assessment.
6. The preferred alternative includes a provision to add up to 15% quicklime to excavated sediments to aid in dewatering. This approach may yield significant temperature increases, particulate or vapor emissions, and an alkaline discharge that could solubilize uranium. The proposed open mixing using a backhoe could exacerbate these potential problems. The Board recommends that these concerns be evaluated and presented in the decision documents.

7. The cost estimate for the preferred alternative included only three years of post-remediation monitoring and maintenance at a present value cost of \$700K. The Board is concerned that the time frame is too short to ensure that the in-stream restoration actions have taken hold and have stabilized. The Board recommends that the monitoring period be increased to a minimum of five years, and longer if by that time no significant storm event (e.g., bankfull discharge) has occurred post-remediation. The monitoring plan also did not include in-stream surveys to document the recovery of aquatic and benthic life. The Board recommends that such surveys be considered.

The NRRB appreciates the Region's efforts in working together with the affected stakeholders at this site. We encourage you to include your draft response to these findings with the draft Proposed Plan when it comes into your OSRTI Regional Support Branch for review. The Regional Support Branch will work with both myself and your staff to resolve any remaining issues prior to your release of the Proposed Plan. Once your response is final and made part of the site's Administrative Record, then a copy of this letter and your response will be posted on the NRRB website. We will work with your regional NRRB representative on the timing of the release.

Thank you for your support and the support of your managers and staff in preparing for this review. Please call me at (703) 603-8774 should you have any questions.

cc: M. Cook (OSRTI)
E. Southerland (OSRTI)
Jim Woolford (FFRRO)
David Lopez (OSRTI)
NRRB members